

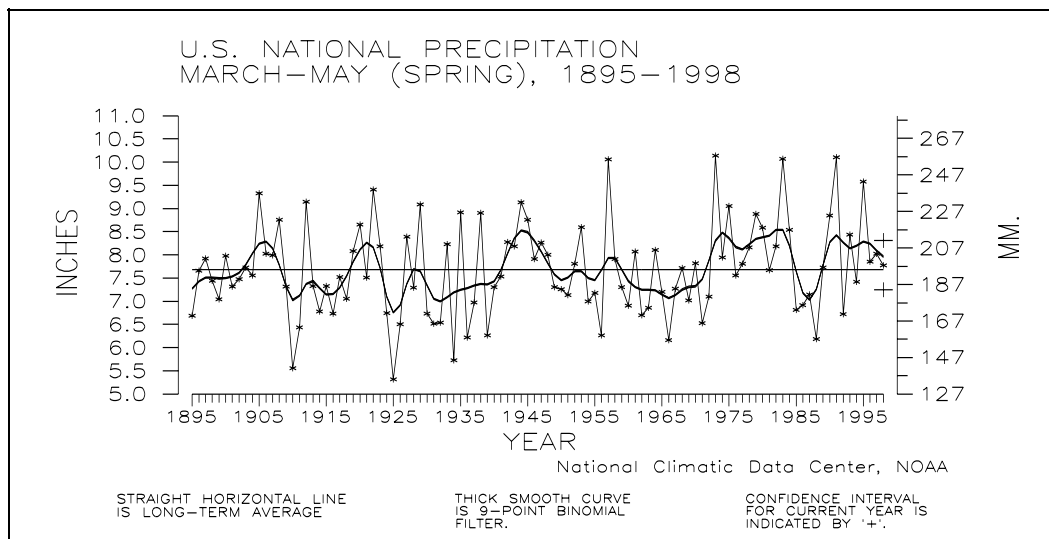
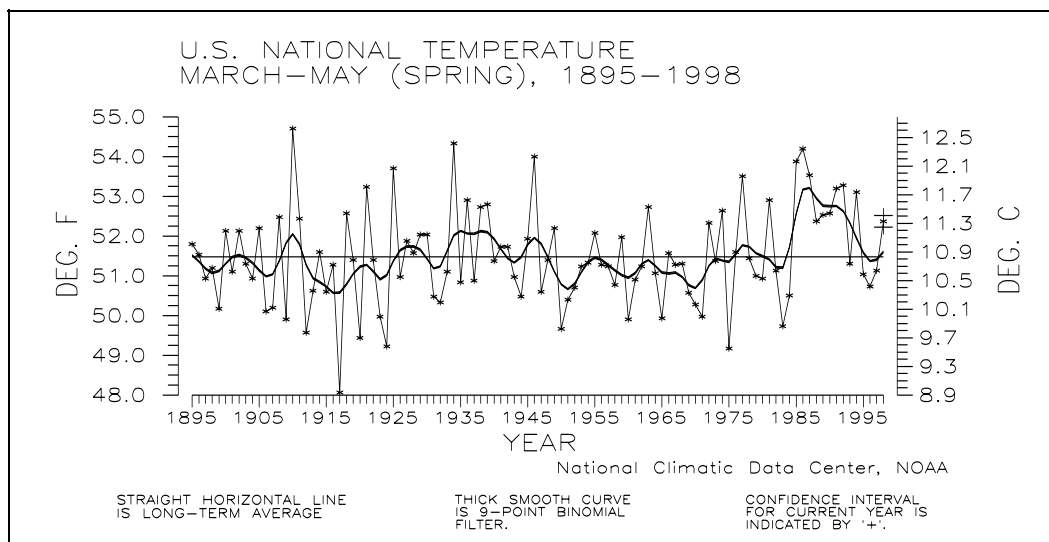
**MAY 1998**

*Includes 1998 Spring Summary*

**HISTORICAL CLIMATOLOGY SERIES 4-7**

Volume 10 Number 5

# CLIMATE VARIATIONS BULLETIN



**noaa**

NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE,  
DATA, AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER  
ASHEVILLE, N.C.

This CLIMATE VARIATIONS BULLETIN (CVB) is a preliminary report that puts current monthly climate anomalies into historical perspective using climate databases archived at the National Climatic Data Center (NCDC). It is issued on a monthly basis. Supplemental sections are included which address seasonal and annual perspectives, when appropriate.

Current data are based on preliminary reports from River Forecast Center stations and First and Second Order airport stations obtained from the National Weather Service (NWS) Climate Prediction Center. **THE CURRENT DATA SHOULD BE USED WITH CAUTION.** These preliminary data are useful for estimating how current anomalies compare to the historical record, however the actual values and rankings for the current year will change as the final data arrive at NCDC and are processed.

The following NCDC datasets are used for the historical data: the climate division drought database (TD-9640), and the hurricane datasets (TD-9636 and TD-9697). It should be noted that the climate division drought database consists of monthly data for 344 climate divisions in the contiguous United States. These divisional values are calculated from the 6000+ station Cooperative Observer network.

If you are a climate researcher and would like to order copies of the historical datasets used to make graphs of the type in this report, call 828-271-4994 or fax a letter to 828-271-4876 or mail a letter to the address given below, ATTN: Research User Services.

All other questions or requests for data should be made by calling 828-271-4800 or sending a fax to 828-271-4876 or by writing to:

National Climatic Data Center, NOAA  
Federal Building  
151 Patton Avenue, Room 120  
Asheville, NC 28801-5001

If you use any of the information from this CVB, please identify "National Climatic Data Center, NOAA" as the source.

# UNITED STATES MAY AND SPRING CLIMATE IN HISTORICAL PERSPECTIVE

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**TABLE 1.** PRECIPITATION AND TEMPERATURE RANKS, BASED  
ON THE PERIOD 1895-1998. 1 = DRIEST/COLDEST,  
104 = WETTEST/WARMEST FOR MAY 1998,  
104 = WETTEST/WARMEST FOR APR-MAY 1998,  
103 = WETTEST/WARMEST FOR DEC 1997-MAY 1998,  
103 = WETTEST/WARMEST FOR JUN 1997-MAY 1998.

REGION	MAY 1998	APR-MAY 1998	DEC 1997- MAY 1998	JUN 1997- MAY 1998
-----	----	-----	-----	-----
<b>PRECIPITATION:</b>				
NORTHEAST	79	82	93	75
EAST NORTH CENTRAL	64	41	81	58
CENTRAL	39	69	62	48
SOUTHEAST	25	54	103	103
WEST NORTH CENTRAL	32	32	38	71
SOUTH	1	1	57	60
SOUTHWEST	11	28	71	90
NORTHWEST	104	93	78	87
WEST	104	103	103	102
NATIONAL	22	29	99	99
<b>TEMPERATURE:</b>				
NORTHEAST	100	99	103	97
EAST NORTH CENTRAL	101	101	103	103
CENTRAL	97	92	101	80
SOUTHEAST	95	83	68	39
WEST NORTH CENTRAL	89	93	99	99
SOUTH	102	85	72	61
SOUTHWEST	63	31	52	70
NORTHWEST	49	58	87	96
WEST	7	6	38	58
NATIONAL	101	93	100	93

**TABLE 2.** EXTREMES, 1961-90 NORMALS, AND 1998 VALUES FOR MAY. IT SHOULD BE NOTED THAT THE 1998 VALUES WILL CHANGE WHEN THE FINAL DATA ARE PROCESSED.

REGION	PRECIPITATION (INCHES)					
	DRIEST		WETTEST		NORMAL	1998
-----	VALUE	YEAR	VALUE	YEAR	PCPN	PCPN
-----	-----	-----	-----	-----	-----	-----
NORTHEAST	.98	1903	7.25	1984	3.79	4.41
EAST NORTH CENTRAL	1.15	1934	6.23	1908	3.29	3.53
CENTRAL	1.65	1934	8.03	1995	4.47	3.76
SOUTHEAST	.97	1941	7.61	1976	4.21	2.88
WEST NORTH CENTRAL	.65	1934	4.63	1962	2.57	2.06
SOUTH	1.50	1998	7.33	1935	4.17	1.50
SOUTHWEST	.19	1974	2.31	1992	1.01	.50
NORTHWEST	.30	1924	3.70	1998	1.79	3.70
WEST	.07	1924	2.84	1998	.73	2.84
NATIONAL	1.78	1934	4.15	1957	2.91	2.46*

\* PRELIMINARY VALUE, CONFIDENCE  
INTERVAL + OR - .32 INCHES

REGION	TEMPERATURE (DEGREES F)					
	COLDEST		WARMEST		NORMAL	1998
-----	VALUE	YEAR	VALUE	YEAR	TEMP	TEMP
-----	-----	-----	-----	-----	-----	-----
NORTHEAST	48.7	1917	61.7	1911	55.5	60.1
EAST NORTH CENTRAL	46.8	1907	63.7	1977	56.0	61.7
CENTRAL	56.7	1917	69.8	1962	62.8	67.6
SOUTHEAST	65.9	1917	74.4	1896	69.3	72.4
WEST NORTH CENTRAL	47.2	1907	62.6	1934	53.7	56.6
SOUTH	65.1	1907	75.3	1896	70.2	74.7
SOUTHWEST	51.7	1917	64.3	1934	58.8	59.3
NORTHWEST	47.7	1896	58.5	1958	52.3	52.4
WEST	53.5	1977	65.6	1992	59.6	55.6
NATIONAL	55.7	1917	65.1	1934	60.7	63.3*

\* PRELIMINARY VALUE, CONFIDENCE  
INTERVAL + OR - .3 DEG. F.

**TABLE 3.** TEMPERATURE AND PRECIPITATION RANKINGS FOR  
JAN-MAY 1998, BASED ON THE PERIOD 1895-1998.  
1 = DRIEST/COLDEST, 104 = WETTEST/HOTTEST.

REGION -----	PRECIPITATION -----	TEMPERATURE -----
NORTHEAST	98	104
EAST NORTH CENTRAL	93	103
CENTRAL	71	103
SOUTHEAST	104	75
WEST NORTH CENTRAL	50	96
SOUTH	46	84
SOUTHWEST	61	65
NORTHWEST	96	90
WEST	104	38
NATIONAL	101	99

**TABLE 4.** EXTREMES, 1961-90 NORMALS, AND 1998 VALUES  
FOR JANUARY-MAY

REGION	PRECIPITATION (INCHES)					
	DRIEST		WETTEST		NORMAL	1998
	VALUE	YEAR	VALUE	YEAR	PCPN	PCPN
NORTHEAST	10.16	1941	22.11	1979	15.84	19.85
EAST NORTH CENTRAL	5.06	1934	13.41	1938	9.87	11.66
CENTRAL	10.36	1941	24.67	1927	17.50	19.51
SOUTHEAST	12.34	1898	27.72	1998	20.76	27.72
WEST NORTH CENTRAL	3.06	1934	8.80	1927	6.37	6.07
SOUTH	8.85	1963	21.44	1957	14.37	13.96
SOUTHWEST	1.71	1972	10.16	1905	4.48	4.82
NORTHWEST	7.37	1924	18.07	1953	13.14	16.13
WEST	4.32	1972	19.66	1998	9.03	19.66
NATIONAL	9.04	1934	14.59	1983	11.81	14.20
REGION	TEMPERATURE (DEGREES F)					
	COLDEST		WARMEST		NORMAL	1998
	VALUE	YEAR	VALUE	YEAR	TEMP	TEMP
NORTHEAST	32.3	1904	40.9	1998	35.5	40.9
EAST NORTH CENTRAL	26.5	1979	39.0	1987	32.1	38.5
CENTRAL	38.8	1978	49.0	1921	43.9	48.3
SOUTHEAST	52.3	1940	59.3	1974	55.5	57.4
WEST NORTH CENTRAL	27.4	1899	39.4	1992	33.3	36.3
SOUTH	51.3	1978	58.2	1911	54.5	56.4
SOUTHWEST	38.6	1917	48.3	1934	43.5	44.1
NORTHWEST	35.0	1922	46.2	1934	39.6	41.7
WEST	43.5	1933	53.1	1934	47.8	47.2
NATIONAL	40.8	1979	46.9	1986	43.8	46.3

**TABLE 5.** TEMPERATURE AND PRECIPITATION RANKINGS FOR  
MARCH-MAY 1998, BASED ON THE PERIOD 1895-1998.  
1 = DRIEST/COLDEST, 104 = WETTEST/HOTTEST.

REGION -----	PRECIPITATION -----	TEMPERATURE -----
NORTHEAST	77	100
EAST NORTH CENTRAL	74	99
CENTRAL	67	84
SOUTHEAST	76	56
WEST NORTH CENTRAL	43	82
SOUTH	7	66
SOUTHWEST	45	36
NORTHWEST	86	73
WEST	97	20
NATIONAL	58	81



**TABLE 6.** EXTREMES, 1961-90 NORMALS, AND 1998 VALUES  
FOR MARCH-MAY

REGION	PRECIPITATION (INCHES)				NORMAL PCPN	1998 PCPN
	DRIEST VALUE	YEAR	WETTEST VALUE	YEAR		
NORTHEAST	5.65	1915	16.86	1983	10.35	11.42
EAST NORTH CENTRAL	3.82	1934	11.66	1991	7.81	8.65
CENTRAL	6.98	1941	18.55	1927	12.34	12.94
SOUTHEAST	6.77	1914	18.29	1980	12.48	13.53
WEST NORTH CENTRAL	2.22	1934	7.57	1995	5.21	4.72
SOUTH	5.89	1925	17.04	1957	9.98	6.91
SOUTHWEST	1.30	1972	6.62	1941	2.86	2.72
NORTHWEST	2.13	1924	9.41	1993	6.48	7.67
WEST	.93	1909	10.15	1995	4.18	7.52
NATIONAL	5.32	1925	10.14	1973	7.76	7.78*

\* PRELIMINARY VALUE, CONFIDENCE  
INTERVAL + OR - .53 INCHES

REGION	TEMPERATURE (DEGREES F)				NORMAL TEMP	1998 TEMP
	COLDEST VALUE	YEAR	WARMEST VALUE	YEAR		
NORTHEAST	40.0	1926	49.4	1921	44.4	47.9
EAST NORTH CENTRAL	37.8	1950	49.9	1977	43.3	46.9
CENTRAL	48.6	1960	57.7	1977	53.1	54.7
SOUTHEAST	59.0	1960	65.9	1908	62.0	62.6
WEST NORTH CENTRAL	36.9	1917	48.0	1910	42.6	43.8
SOUTH	57.7	1931	65.4	1963	62.2	62.5
SOUTHWEST	44.6	1917	55.4	1934	50.2	49.5
NORTHWEST	40.4	1955	52.0	1934	45.3	46.2
WEST	48.9	1896	59.1	1934	52.6	50.9
NATIONAL	48.1	1917	54.7	1910	51.6	52.4*

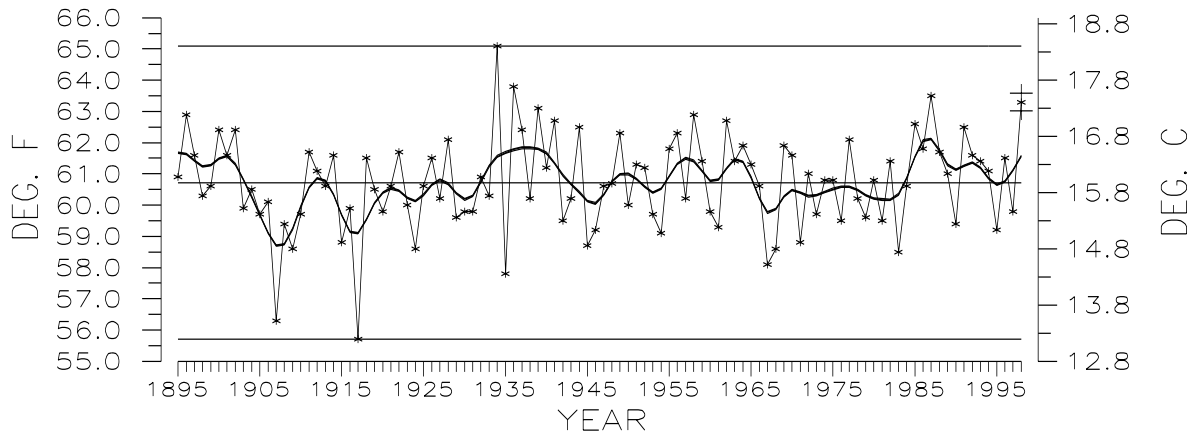
\* PRELIMINARY VALUE, CONFIDENCE  
INTERVAL + OR - .2 DEG. F.

**TABLE 7.**

STATISTICS FOR SELECTED RIVER BASINS:  
 AREAL PERCENT OF THE BASIN EXPERIENCING SEVERE OR  
 EXTREME LONG-TERM (PALMER) DROUGHT, AND AREAL PERCENT  
 OF THE BASIN EXPERIENCING SEVERE OR EXTREME LONG-TERM  
 (PALMER) WET CONDITIONS, AS OF MAY 1998.  
 RIVER BASIN REGIONS AS DEFINED BY THE U.S. WATER  
 RESOURCES COUNCIL.

RIVER BASIN -----	% AREA DRY -----	% AREA WET -----
MISSOURI BASIN	.0%	13.2%
PACIFIC NORTHWEST BASIN	.0%	22.3%
CALIFORNIA RIVER BASIN	.0%	95.8%
GREAT BASIN	.0%	79.5%
UPPER COLORADO BASIN	.0%	.0%
LOWER COLORADO BASIN	.0%	37.6%
RIO GRANDE BASIN	.0%	.0%
ARKANSAS-WHITE-RED BASIN	.0%	14.4%
TEXAS GULF COAST BASIN	.0%	.0%
SOURIS-RED-RAINY BASIN	.0%	37.7%
UPPER MISSISSIPPI BASIN	.0%	.0%
LOWER MISSISSIPPI BASIN	.0%	.0%
GREAT LAKES BASIN	6.7%	.0%
OHIO RIVER BASIN	.0%	.0%
TENNESSEE RIVER BASIN	.0%	.0%
NEW ENGLAND BASIN	.0%	7.7%
MID-ATLANTIC BASIN	.0%	31.3%
SOUTH ATLANTIC-GULF BASIN	.0%	34.1%

# U.S. NATIONAL TEMPERATURE MAY, 1895-1998



National Climatic Data Center, NOAA

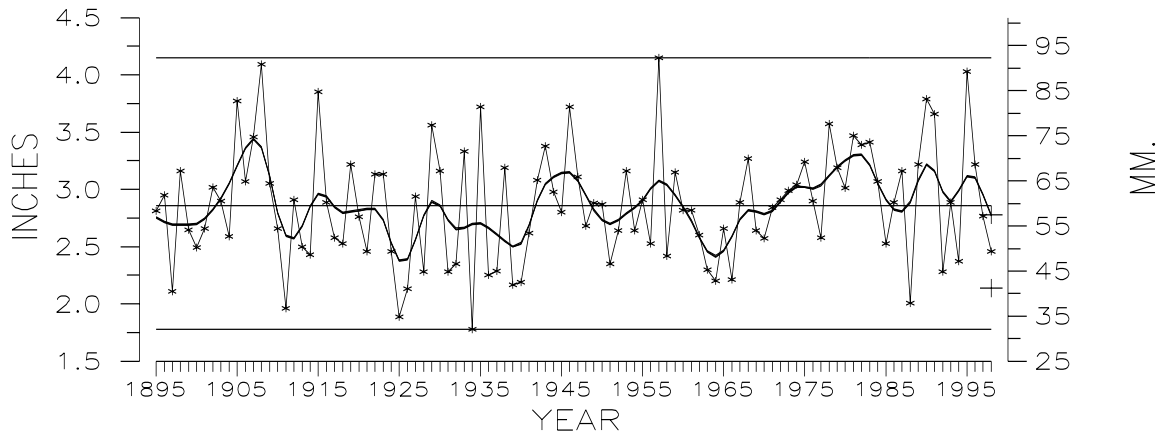
STRAIGHT HORIZONTAL LINES ARE:  
MAXIMUM VALUE (TOP),  
LONG-TERM AVERAGE (MIDDLE),  
MINIMUM VALUE (BOTTOM)

THICK SMOOTH CURVE  
IS 9-POINT BINOMIAL  
FILTER.

CONFIDENCE INTERVAL  
FOR CURRENT YEAR IS  
INDICATED BY '+'.  
+

Figure 1: Preliminary data for May 1998 indicate that temperature averaged across the contiguous United States was above the long-term mean ranking as the 4th warmest May since 1895. Forty-five percent of the country was much warmer than normal while four percent of the country was much cooler than normal.

# U.S. NATIONAL PRECIPITATION MAY, 1895-1998



National Climatic Data Center, NOAA

STRAIGHT HORIZONTAL LINES ARE:  
MAXIMUM VALUE (TOP),  
LONG-TERM AVERAGE (MIDDLE),  
MINIMUM VALUE (BOTTOM)

THICK SMOOTH CURVE  
IS 9-POINT BINOMIAL  
FILTER.

CONFIDENCE INTERVAL  
FOR CURRENT YEAR IS  
INDICATED BY '+'.  
+

Figure 2: Preliminary precipitation data indicate that May 1998 was the 22nd driest such month since 1895. Over 21% of the country experienced much drier than normal conditions while about 15% of the country was much wetter than normal.

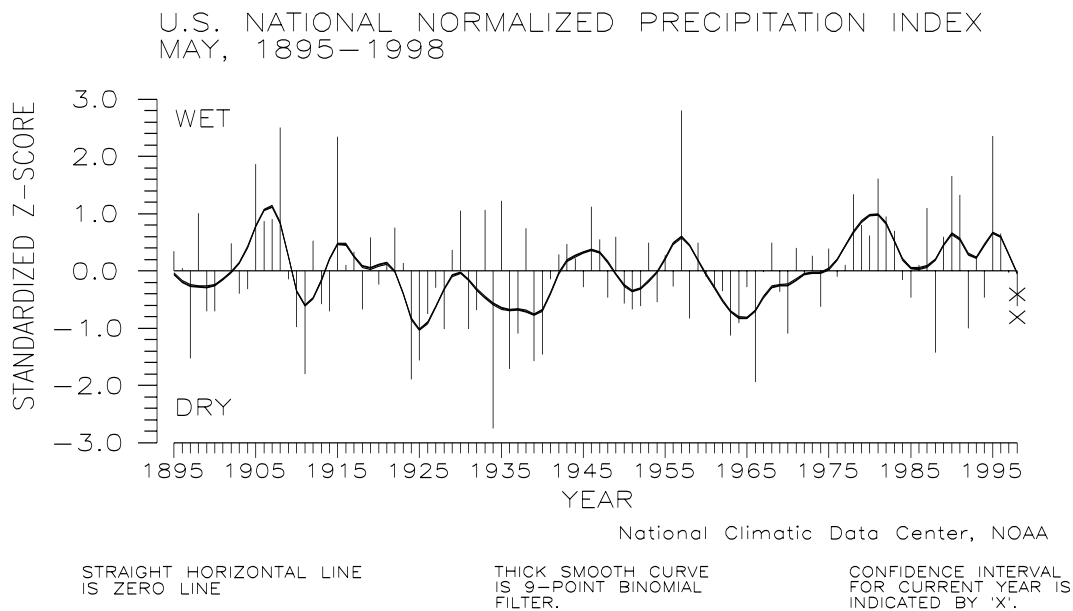


Figure 3: The preliminary national standardized precipitation index ranked May 1998 as the 29th driest such month on record. This standardized z-score is estimated to be accurate to within 0.203 index units and its confidence interval is shown as an 'X'.

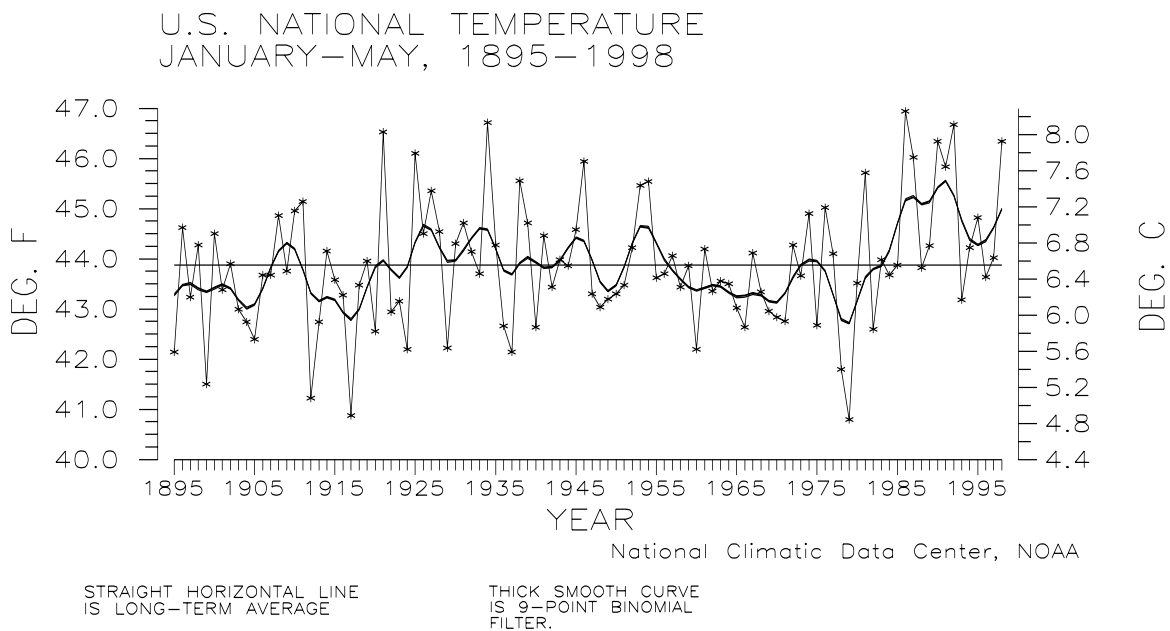


Figure 4: Based upon preliminary data, January-May 1998 was the sixth warmest such period on record. Forty percent of the country had much warmer than normal January-May temperatures while none of the country was much cooler than normal. Ten of the last thirteen such five-month periods have been above- to much-above the long-term mean.

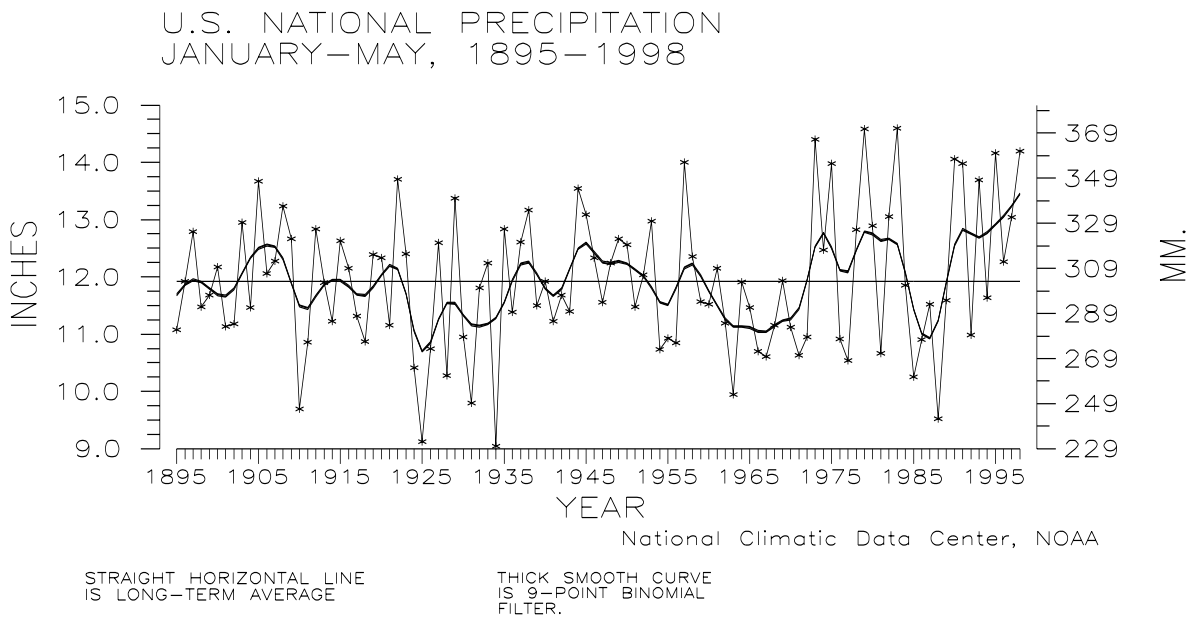


Figure 5: Preliminary precipitation data indicate that the year-to-date, January-May 1998, was the fourth wettest such five-month period since records began. About 27% of the country was much wetter than normal while two percent of the country was much drier than normal. Seven of the last nine such five-month periods have been wetter- to much-wetter than normal.

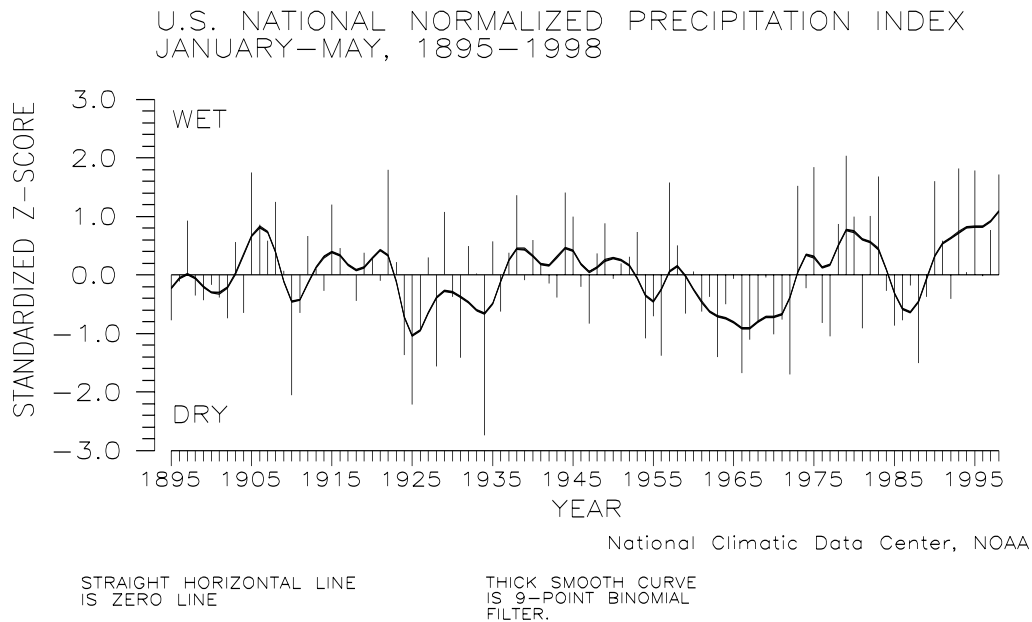


Figure 6: The preliminary national year-to-date standardized precipitation index ranked January-May 1998 as the seventh wettest such period since 1895.

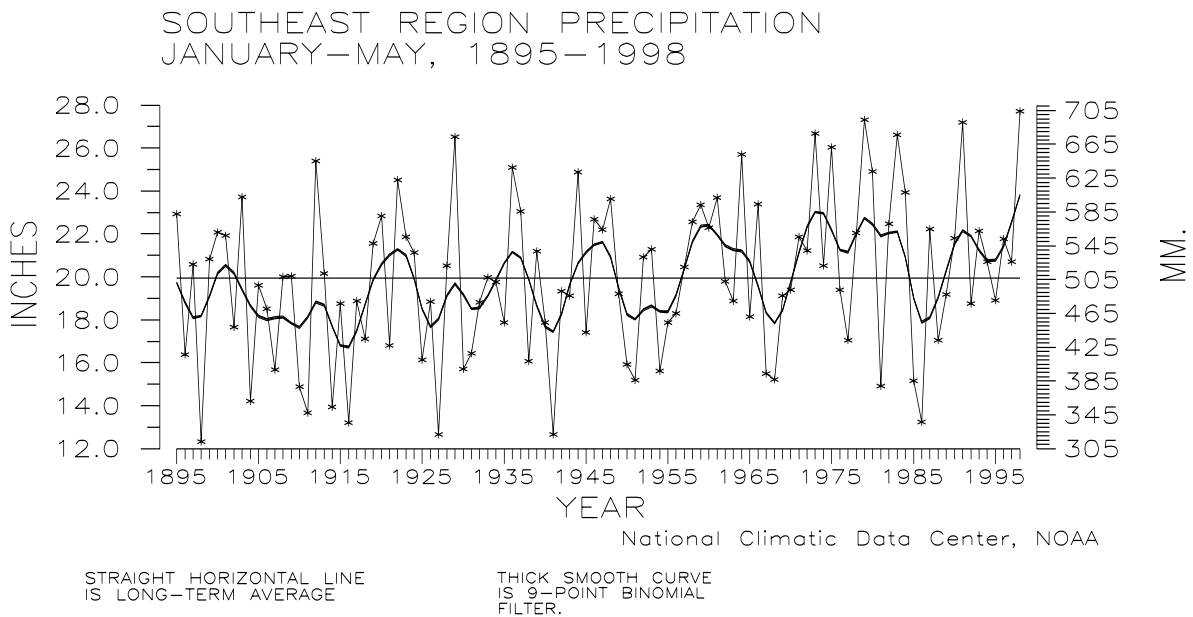


Figure 7: Preliminary precipitation data indicate that the year-to-date, January-May 1998, was the wettest such five-month period since records began for the Southeast Region.

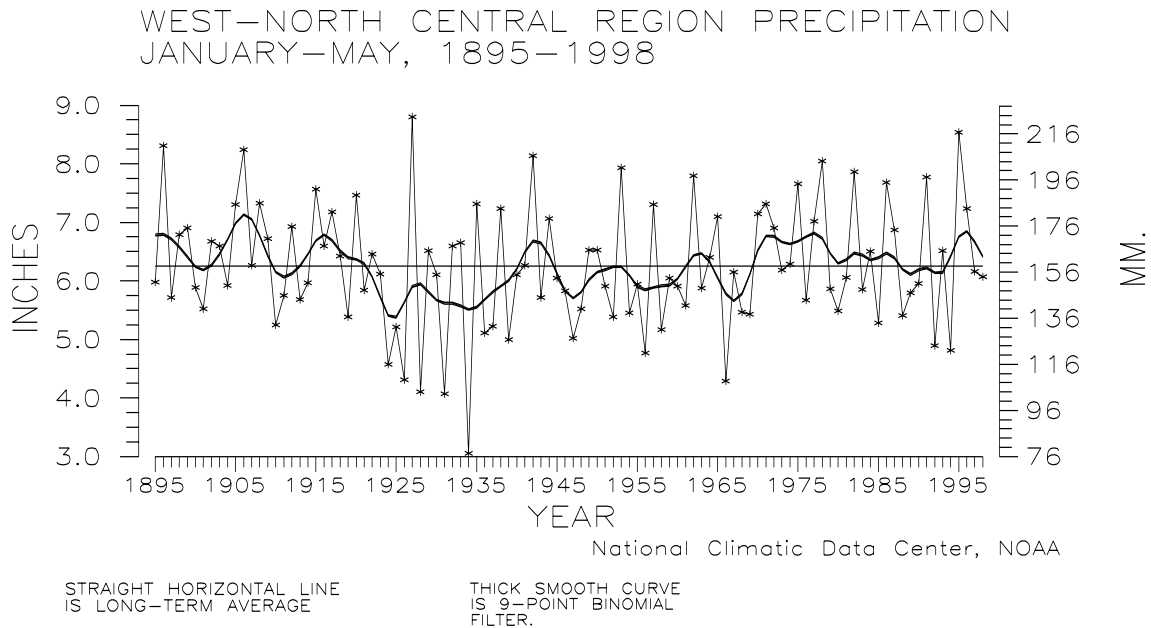
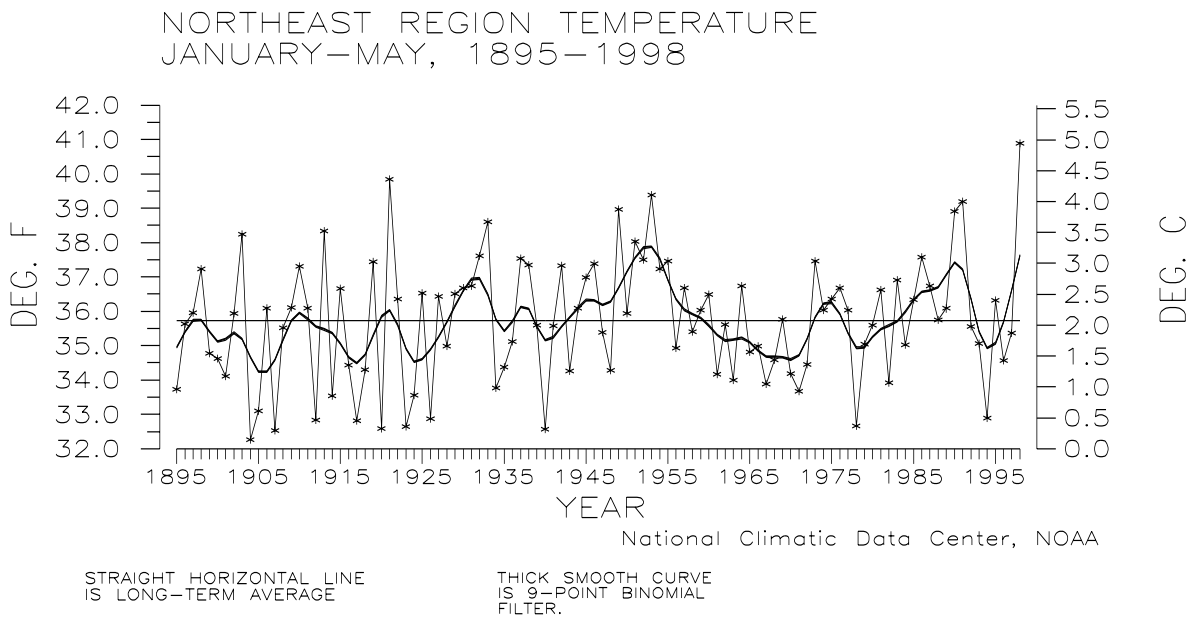
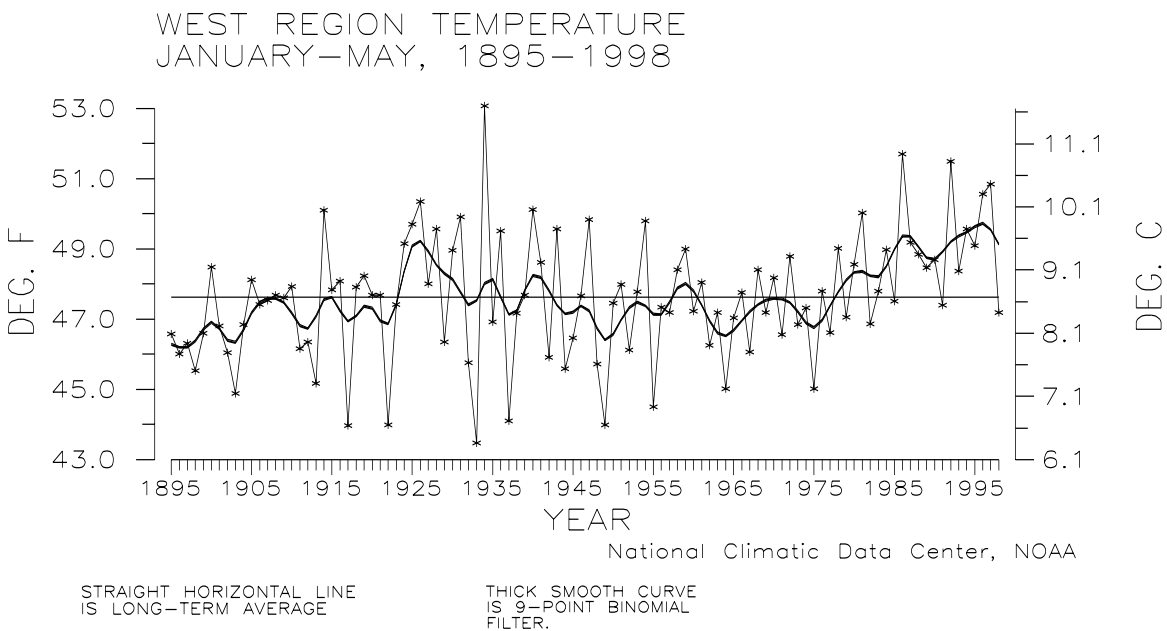


Figure 8: Preliminary data indicate that the year-to-date, January-May 1998, was the 50th driest such period on record for the West-North Central Region.



**Figure 9:** Preliminary temperature data indicate that the year-to-date, January-May 1998, was the warmest such five-month period since records began for the Northeast Region.



**Figure 10:** Preliminary data indicate that the year-to-date, January-May 1998, was the 38th coolest such period on record for the West Region. This is the first such period since 1991 to average below normal. Eleven of the last thirteen such five-month periods have been much warmer than normal.

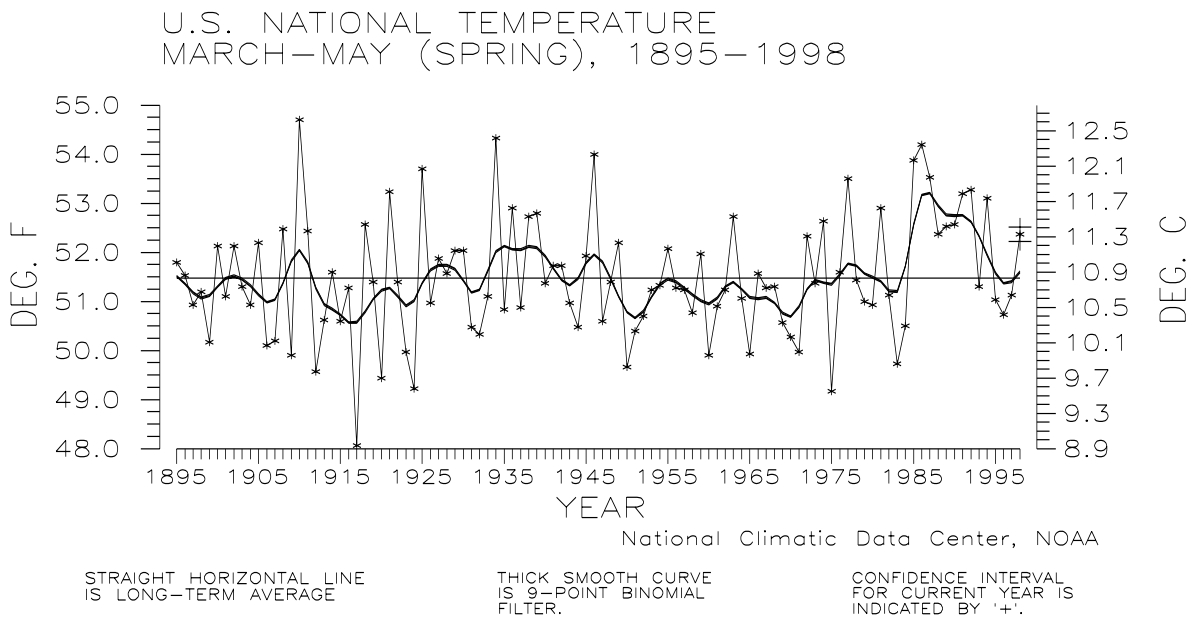


Figure 11: Preliminary temperature data indicate that the 1998 Spring season, March-May, for the contiguous United States, was the 24th warmest such season since 1895. Eighteen percent of the country was much warmer than normal while about three percent of the country was much cooler than normal.

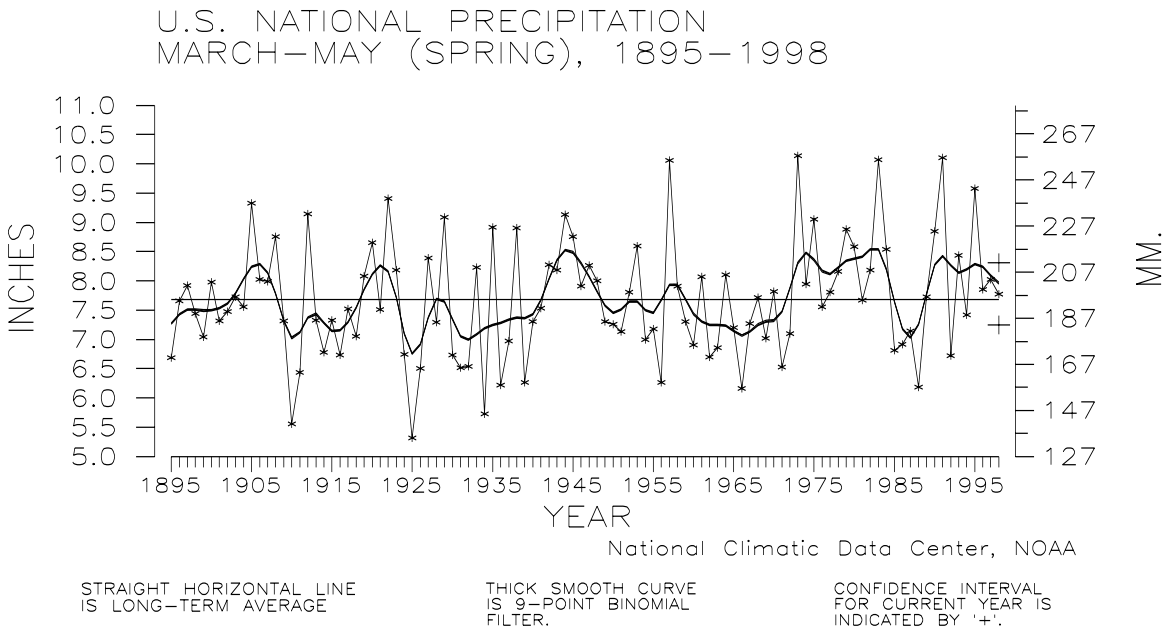


Figure 12: Preliminary data indicate that Spring 1998 was the 47th wettest such period on record for the contiguous United States. Nearly 15% of the country was much wetter than normal while about nine percent of the country was much drier than normal.



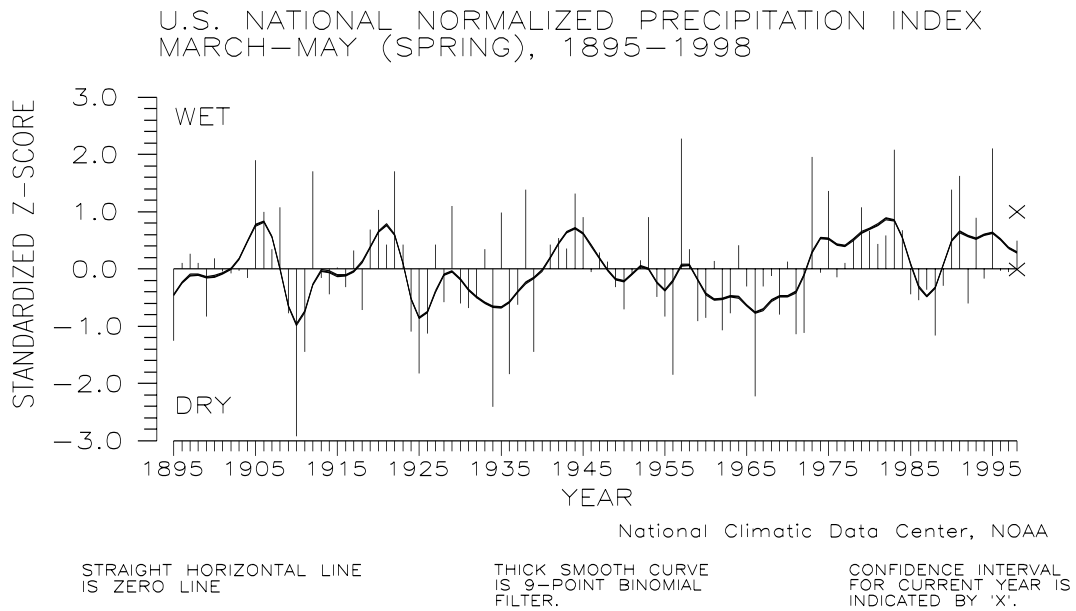


Figure 13: The preliminary national standardized precipitation index ranked Spring 1998 as the 28th wettest spring on record. This index shows more accurately how precipitation across the country compares to the local normal (60-year average).

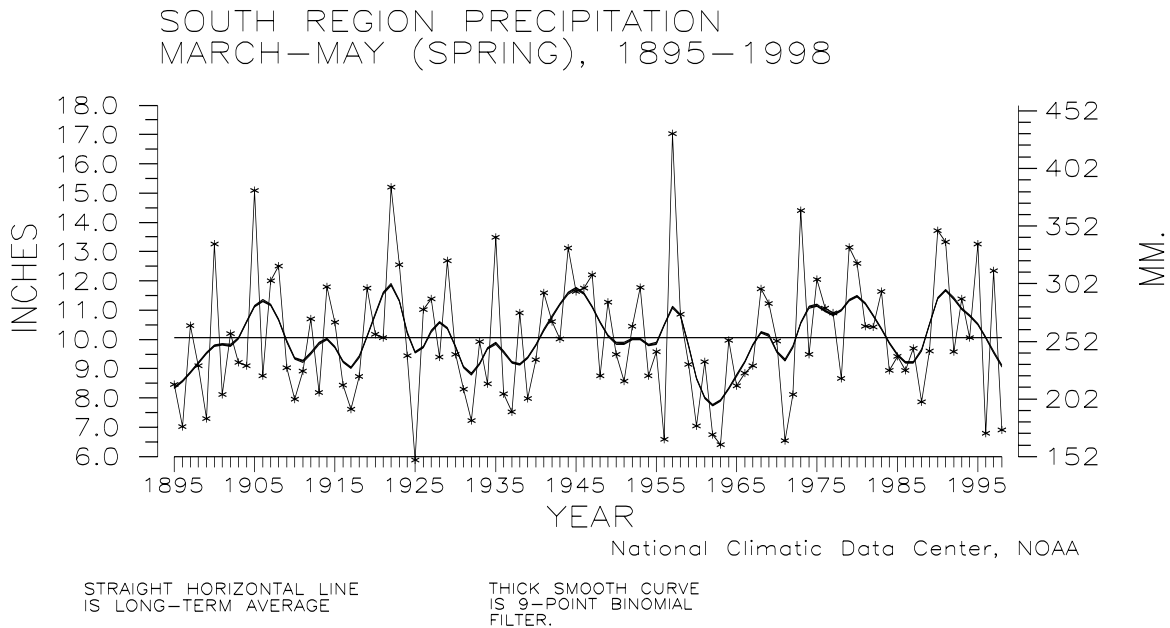


Figure 14: Preliminary data indicate that Spring 1998 was the 7th driest such period on record for the South Region.

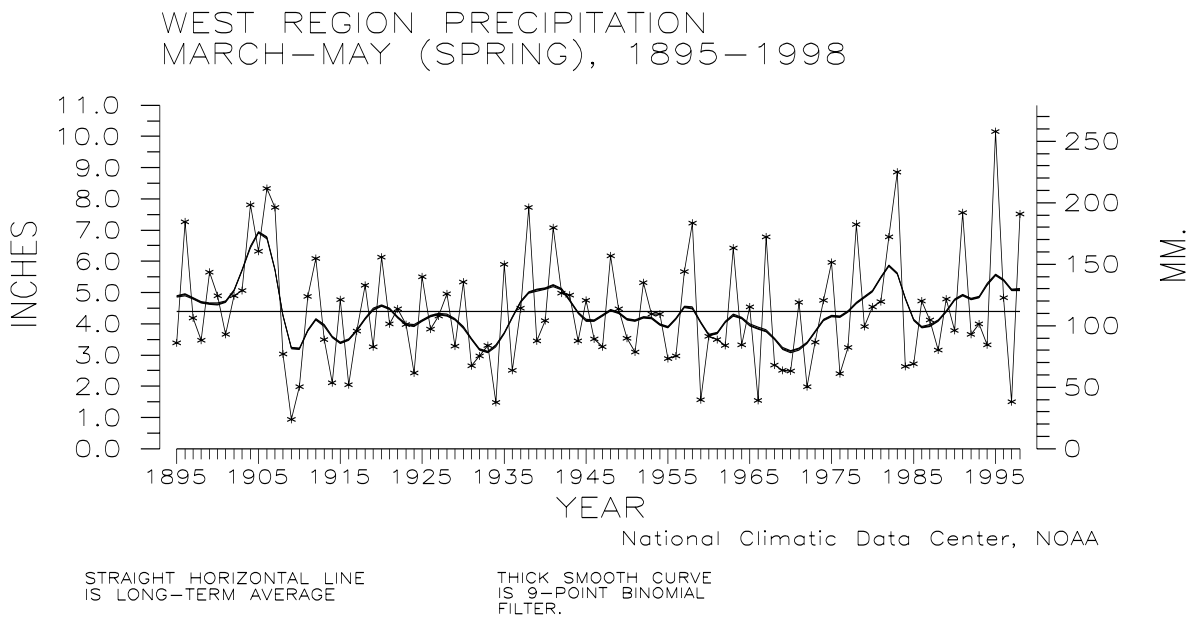


Figure 15: Spring 1998 was the eighth wettest such three-month period on record for the West Region. The West Region includes California and Nevada.

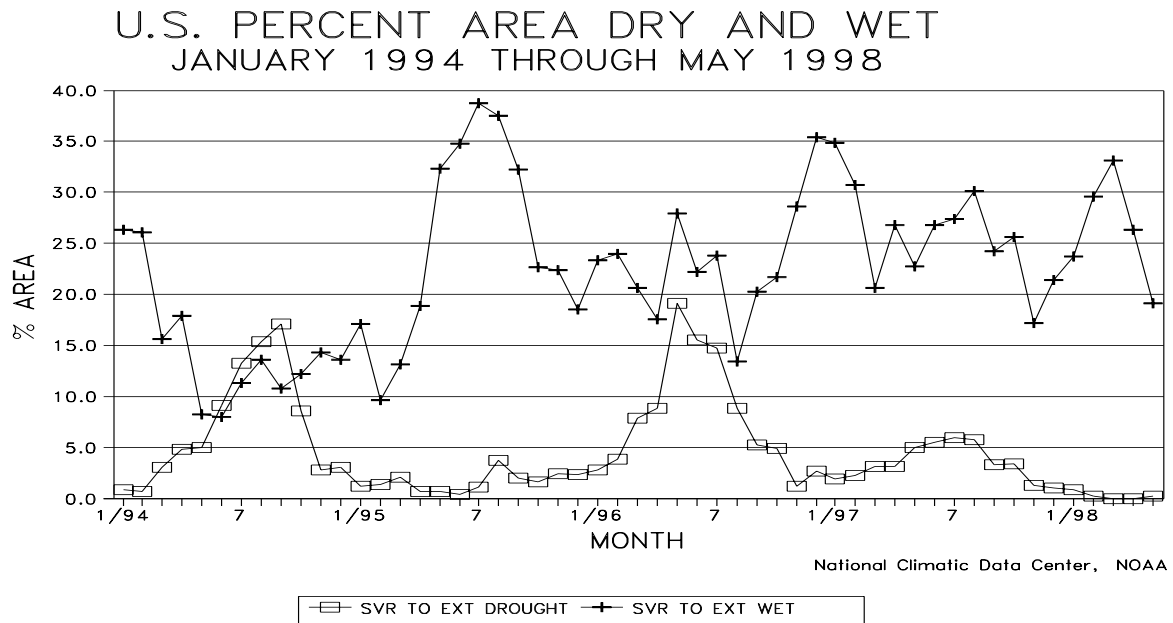


Figure 16: Long-term drought coverage (as measured by the Palmer Drought Index) remained nearly steady during May 1998 with less than one percent of the country experiencing severe to extreme drought and over 19% of the country experiencing severe to extreme wetness by the end of the month. Core wet areas included California, the Great Basin and portions of the Southeast while core dry areas included portions of Texas and the northern Great Plains.

PRIMARY CORN AND SOYBEAN BELT  
PRECIPITATION  
MARCH–MAY, 1895–1998

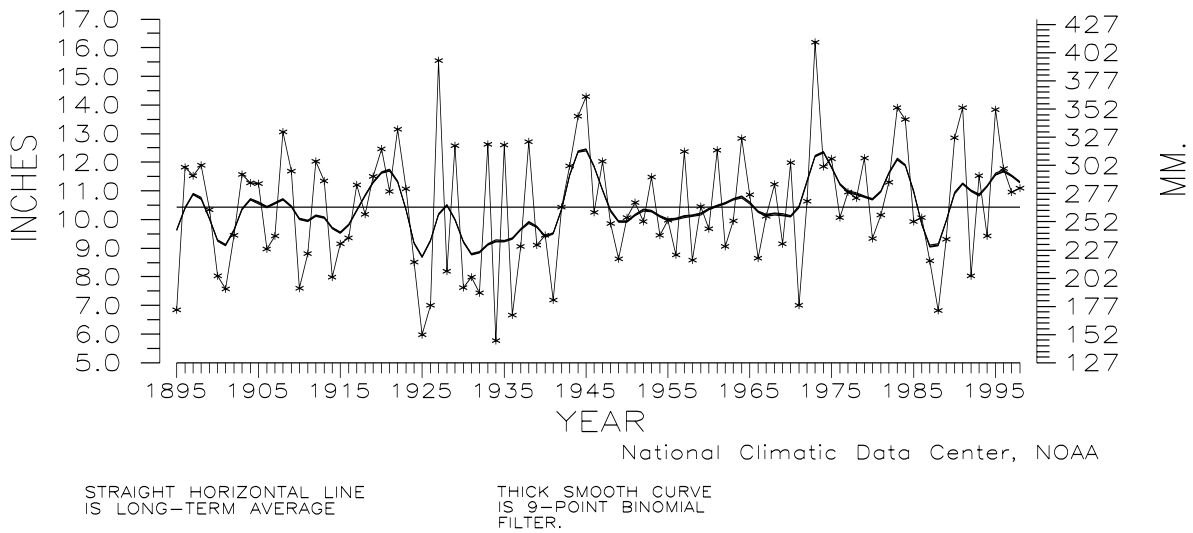
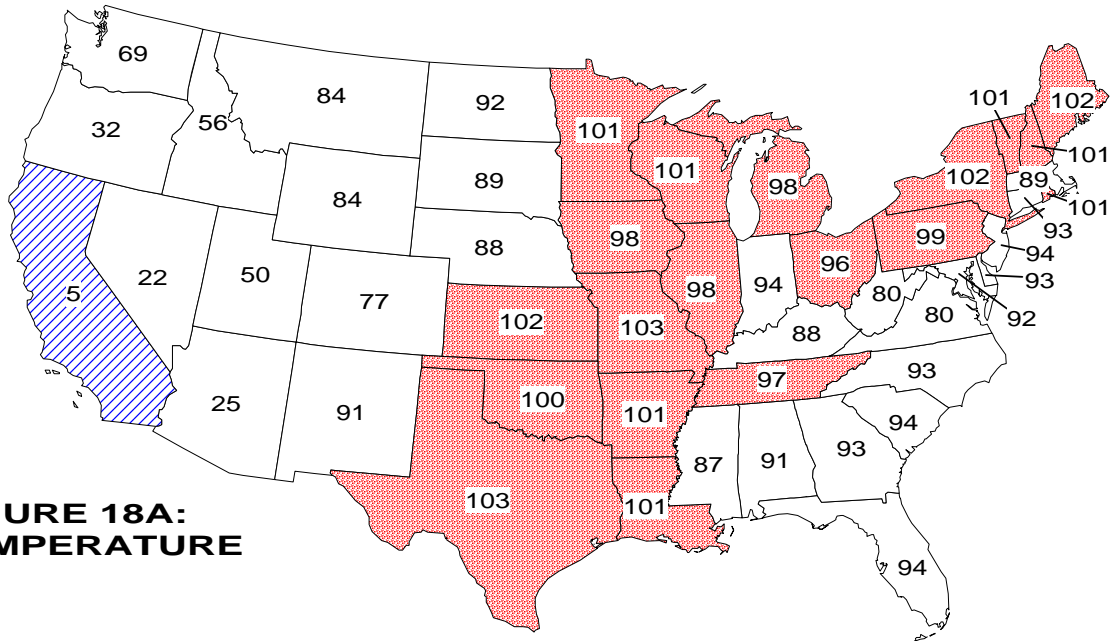
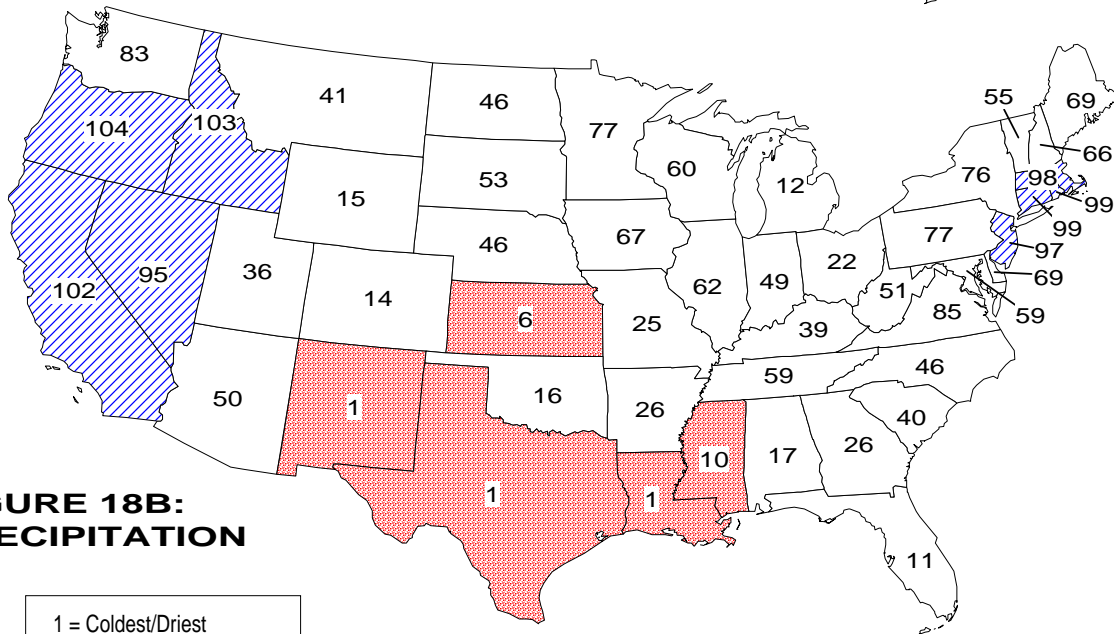


Figure 17: Precipitation for the three-month period, March–May, was slightly above normal averaged across the Primary Corn and Soybean Belt.

## MAY 1998 STATEWIDE RANKS



**FIGURE 18A:  
TEMPERATURE**



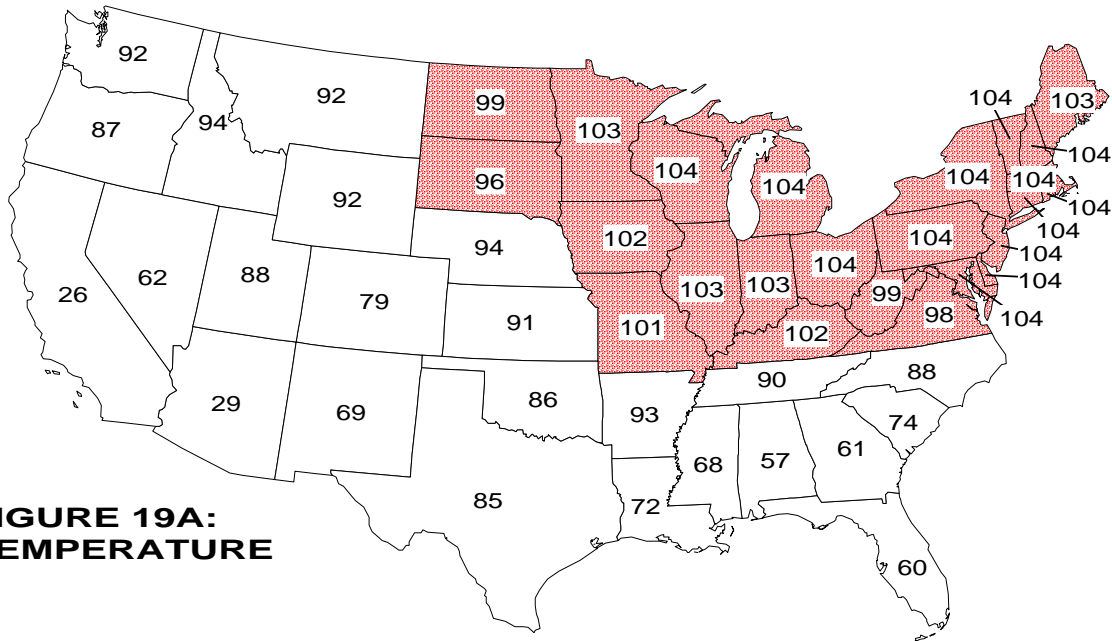
**FIGURE 18B:  
PRECIPITATION**

1 = Coldest/Driest  
104 = Warmest/Wettest

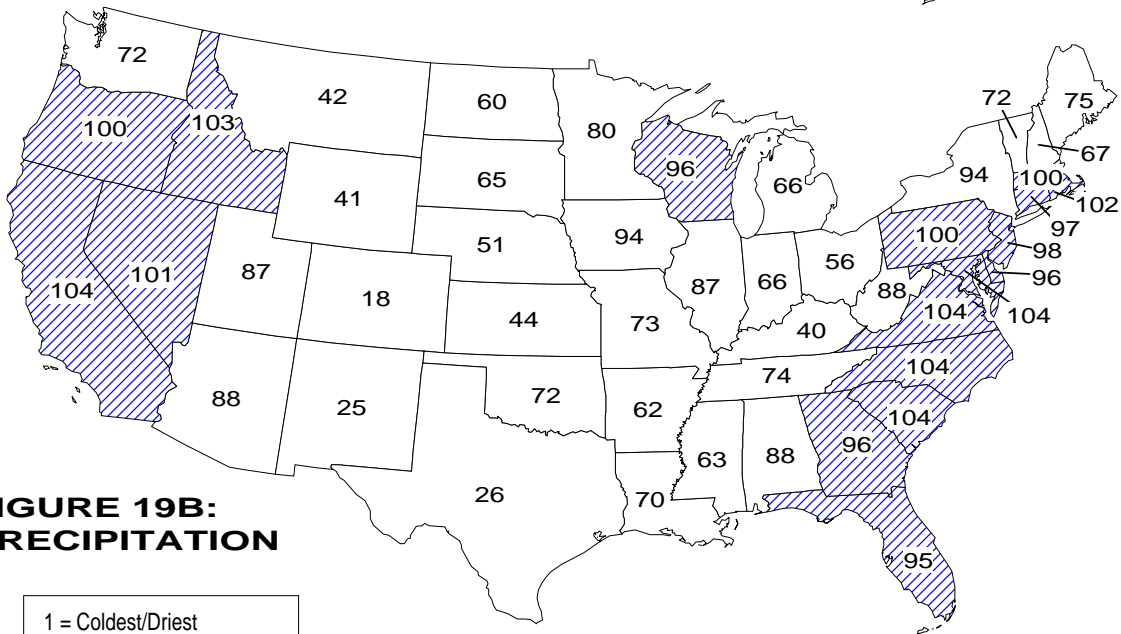
National Climatic Data Center, NOAA

Temperature and Precipitation Ranks for the contiguous United States. Each state is ranked based on its data from 1895-1998. States having a rank of top ten coldest or driest (rank 1-10) or top ten warmest or wettest (rank 95-104) are shaded.

## JAN-MAY 1998 STATEWIDE RANKS



**FIGURE 19A:  
TEMPERATURE**



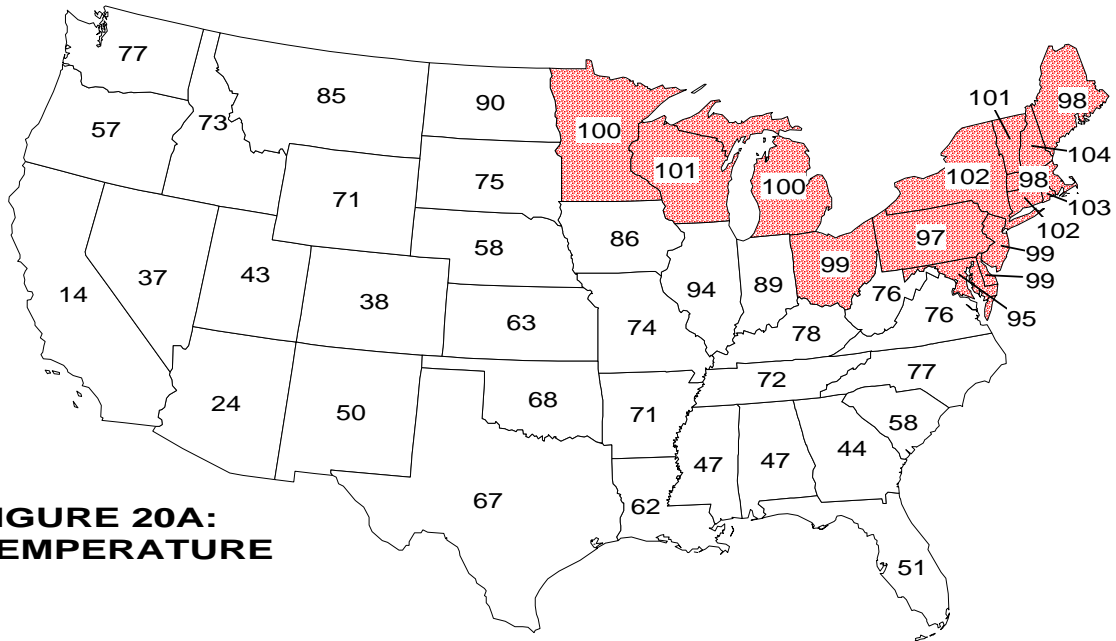
**FIGURE 19B:  
PRECIPITATION**

1 = Coldest/Driest  
104 = Warmest/Wettest

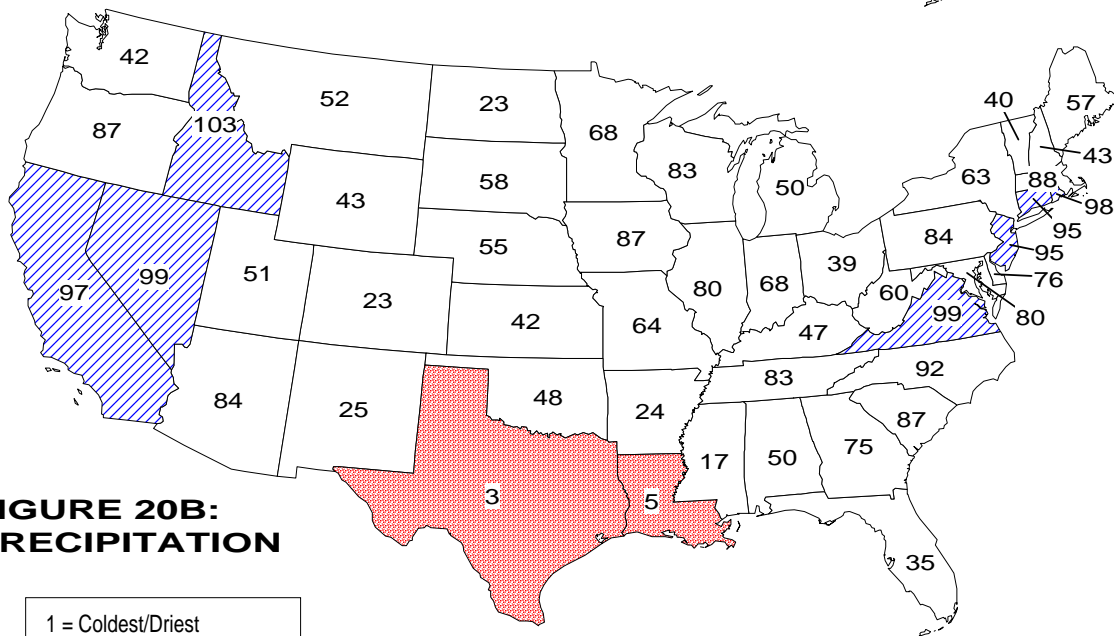
National Climatic Data Center, NOAA

Temperature and Precipitation Ranks for the contiguous United States. Each state is ranked based on its data from 1895-1998. States having a rank of top ten coldest or driest (rank 1-10) or top ten warmest or wettest (rank 95-104) are shaded.

## MARCH-MAY 1998 STATEWIDE RANKS



**FIGURE 20A:  
TEMPERATURE**



**FIGURE 20B:  
PRECIPITATION**

1 = Coldest/Driest  
104 = Warmest/Wettest

National Climatic Data Center, NOAA

Temperature and Precipitation Ranks for the contiguous United States. Each state is ranked based on its data from 1895-1998. States having a rank of top ten coldest or driest (rank 1-10) or top ten warmest or wettest (rank 95-104) are shaded.

SSMI MEAN TEMP. ANOMALY IN CELSIUS MAY 1998  
(SNOW COVER WITHIN OR NORTH OF 15% CONTOUR)

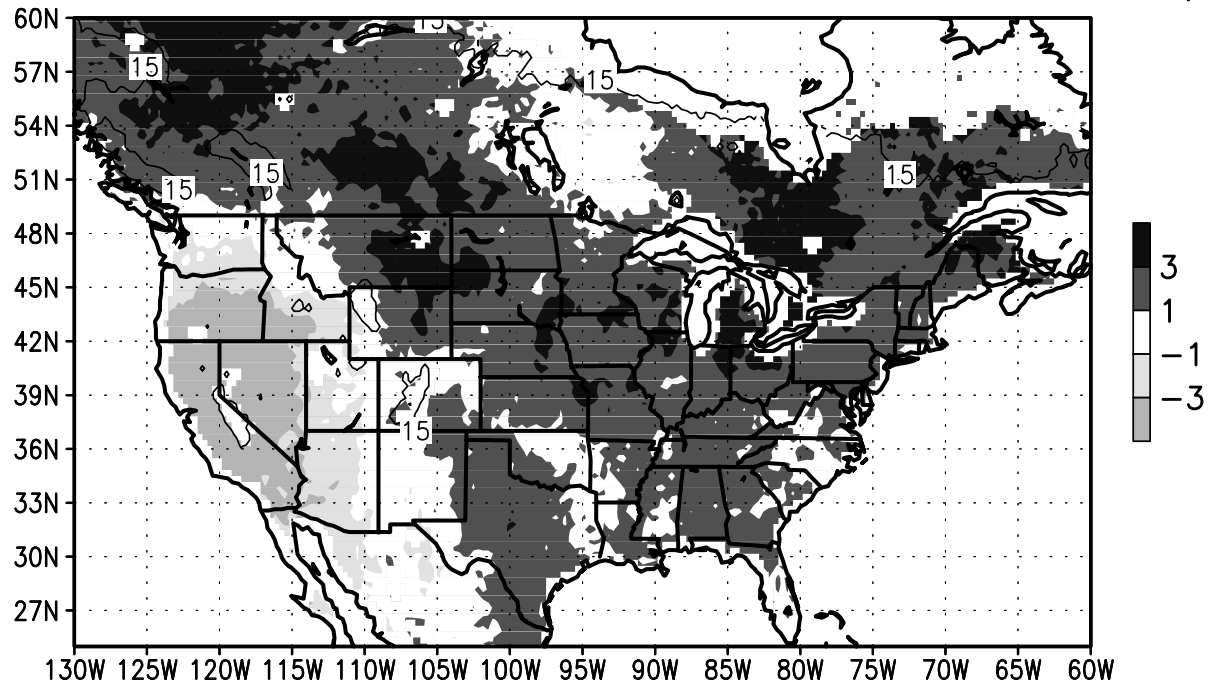


Figure 21

SURFACE WETNESS ANOMALY (%) MAY 1998

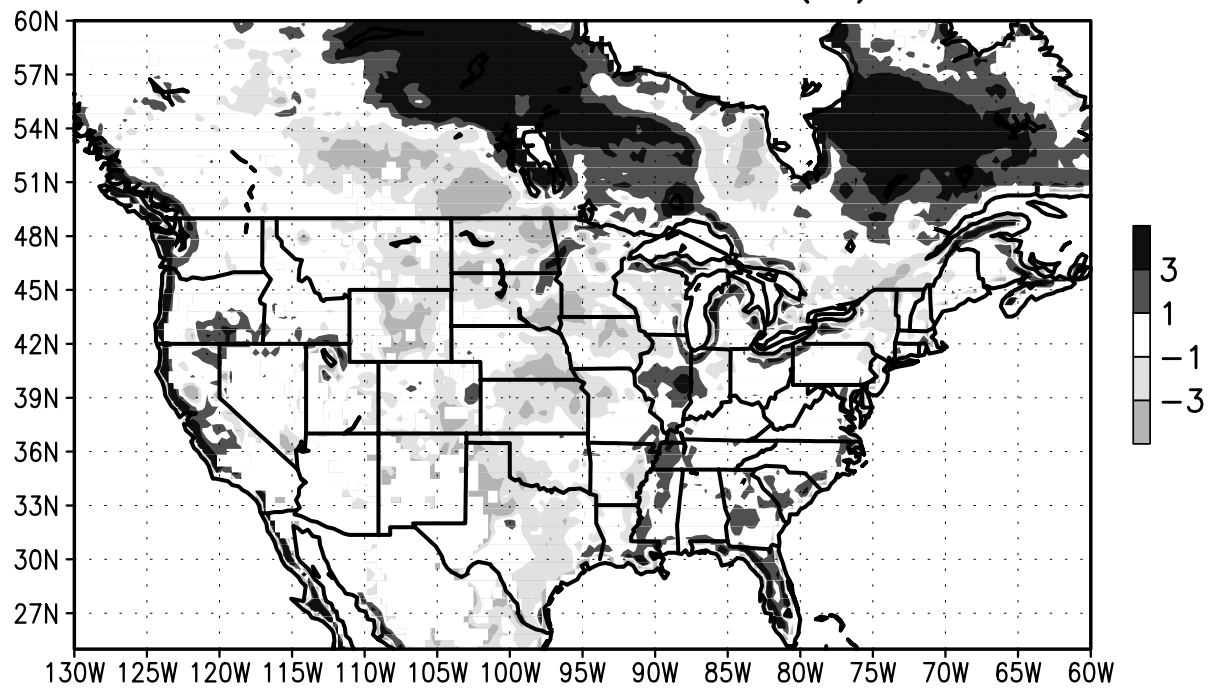


Figure 22

**Figure 18A** shows, in illustrative map form, the May 1998 temperature rankings for the 48 contiguous states. One state was within the top ten cool portion of the historical distribution while three others were within the cool third of the historical distribution. Nineteen states ranked within the top ten warm portion of the historical distribution while 22 additional states ranked within the warm third of the distribution.

May 1998 state ranks for precipitation are shown in **Figure 18B**. Eight states ranked within the top ten wet portion of the distribution while five others ranked within the wet third portion of the distribution. Five states ranked within the top ten dry portion of the historical distribution while ten others ranked within the dry third. ***It should be noted that these May state precipitation ranks are preliminary and should be used with considerable caution due to the high variability of precipitation on a small space and time scale.***

Year-to-date 1998 statewide temperature and precipitation ranks are shown in **Figures 19A and 19B**. Twenty-four states ranked within the top ten warm portion of the historical distribution while 16 others ranked within the warm third of the distribution. The year-to-date was the warmest such period on record for Connecticut, Delaware, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin. The January-May period was the second warmest such period on record for Illinois, Indiana, Maine, and Minnesota. No state was within the top ten cool while California ranked 26th coolest, the only state within the cool-third of the historical distribution. It was the wettest January-May period on record for California, Maryland, North Carolina, South Carolina, and Virginia. Twelve other states ranked within the top ten wet portion of the distribution. Three states ranked within the dry third of the distribution.

**Figure 20A** shows the Spring (March-May) 1998 temperature rankings for the 48 contiguous states. Spring 1998 was the warmest on record for New Hampshire and the second warmest for Rhode Island. Thirteen other states ranked within the top ten warm portion of the distribution while an additional 16 were within the warm-third portion of the historical distribution. It was the 14th coolest Spring on record for California and the 24th coolest such three-month period on record for Arizona, the only two states within the cool-third portion of the distribution.

**Figure 20B** shows the Spring 1998 precipitation rankings for the 48 contiguous states. Spring 1998 was the second wettest such season on record for Idaho. Six other states ranked within the top ten wet portion of the distribution while an additional 13 ranked within the wet-third portion of the distribution. It was the third driest Spring on record for Texas and the fifth driest for Louisiana. Six additional states ranked within the dry-third of the distribution.

**Figure 21** shows the mean monthly temperature anomalies for the month of May 1998. The base period is seven years (1992-98). This experimental product is derived from the Special Sensor Microwave Imager (SSM/I), an instrument flown on a polar orbiting satellite of the defense meteorological satellite program. The anomalies are in degrees Celsius. Below normal temperatures cover the Pacific Northwest and southwestern states, where the jet stream brought unusually cool northwest winds. The remainder of North America experienced above normal temperatures, as southwesterly winds and high pressure dominated this portion of the globe. These warm conditions caused the snow pack in central Canada to melt earlier than normal. Areas where the snow persisted are depicted by the 15% contour. The satellite was able to identify temperature anomalies over all but a small portion of the country during May. Full and anomalous fields for temperature, surface and snow cover for both North America and the globe can be viewed on the web at: <http://www.ncdc.noaa.gov/plwebapps/plsql/ssmimain>.

**Figure 22** shows the mean monthly surface wetness anomalies for May 1998. This product is derived from the SSM/I. Values represent the deviation from the climatological average, using a 1992-1998 base period. Surface wetness can originate from numerous sources: rainfall, melting snow cover, river flood plain, wet lands, or irrigated fields. The radiating surface observed by the satellite can be the ground, or in places of dense vegetation, it can be the water in the vegetated canopy itself. These wetness values do not necessarily equate to soil moisture, although in areas of sparse or limited vegetation, there is a strong correspondence. During the month of May, central Canada experienced above normal temperatures and a premature melting of the snow cover, which translates to above normal surface wetness. Below normal surface wetness values further south, over the center of the continent, corresponded to above normal temperatures in April, causing premature melting of the snow cover. This left the surface drier than usual in May. The plains states of the U.S. were unusually warm and dry during the month, producing below normal surface wetness values. The Southwest was unusually wet for the month. The full and anomalous surface wetness fields can be observed for North America and the globe on the web at: <http://www.ncdc.noaa.gov/plwebapps/plsql/ssmimain>.



# JANUARY-MAY (YEAR-TO-DATE) TEMPERATURE AND PRECIPITATION RECORDS IN THE CONTIGUOUS UNITED STATES

(Temperatures in degrees F, Precipitation in inches)

***January-May 1998 was the wettest on record (since 1895) for two regions and five states:***

Region	1998 Value	1998 Percent of Normal	1961-90 Normal	Second Wettest Value & Year
-----	-----	-----	-----	-----
Southeast	27.72"	134%	20.76"	27.31" in 1979
West	19.66"	218%	9.03"	19.04" in 1995

State	1998 Value	1998 Percent of Normal	1961-90 Normal	Second Wettest Value & Year
-----	-----	-----	-----	-----
California	28.04"	228%	12.31"	27.49" in 1909
Maryland	24.55"	141%	17.39"	24.45" in 1924
North Carolina	29.20"	145%	20.08"	26.31" in 1979
South Carolina	29.98"	149%	20.17"	28.64" in 1929
Virginia	27.88"	162%	17.26"	23.30" in 1984

***January-May 1998 was the second wettest on record (back to 1895) for one state:***

State	1998 Value	1998 Percent of Normal	1961-90 Normal	Wettest Value & Year
-----	-----	-----	-----	-----
Idaho	11.89"	134%	8.86"	12.17" in 1996

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**January-May 1998 was the warmest on record (since 1895) for one region and 13 states:**

Region	1998 Value	1998 Dep. from Normal	1961-90 Normal	Second Warmest Value & Year
-----	-----	-----	-----	-----
Northeast	40.9	+5.4	35.5	39.8 in 1921
State	1998 Value	1998 Dep. from Normal	1961-90 Normal	Second Warmest Value & Year
-----	-----	-----	-----	-----
Connecticut	43.6	+5.2	38.4	42.8 in 1991
Delaware	50.0	+4.9	45.1	49.5 in 1991
Maryland	48.8	+4.5	44.3	48.6 in 1990
Massachusetts	41.8	+4.6	37.2	41.2 in 1949
Michigan	39.1	+6.1	33.0	38.6 in 1921
New Hampshire	37.9	+5.2	32.7	36.1 in 1953
New Jersey	47.7	+5.4	42.3	46.4 in 1991
New York	40.1	+5.8	34.3	38.9 in 1921
Ohio	46.4	+5.9	40.5	45.8 in 1921
Pennsylvania	44.5	+5.9	38.6	44.0 in 1921
Rhode Island	44.1	+4.5	39.6	43.0 in 1949
Vermont	36.9	+5.3	31.6	35.8 in 1953
Wisconsin	38.7	+7.2	31.5	37.9 in 1987

**January-May 1998 was the second warmest on record (since 1895) for two regions and four states:**

Region	1998 Value	1998 Dep. from Normal	1961-90 Normal	Warmest Value & Year
-----	-----	-----	-----	-----
East North Central	38.5	+6.4	32.1	39.0 in 1987
Central	48.3	+4.4	43.9	49.0 in 1921
State	1998 Value	1998 Dep. from Normal	1961-90 Normal	Warmest Value & Year
-----	-----	-----	-----	-----
Illinois	46.6	+5.2	41.4	47.3 in 1921
Indiana	46.7	+5.3	41.4	47.1 in 1921
Maine	33.60	+4.3	29.3	33.62 in 1913
Minnesota	36.0	+7.3	28.7	37.4 in 1987

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